

# **MMPA Small Take Authorization**

Presented by:

Ken Hollingshead  
NOAA Fisheries  
Office of Protected Resources  
Marine Mammal Conservation  
Division





# Marine Mammal Protection Act Small Take Authorization Program

The Marine Mammal Protection Act (MMPA)

- Prohibits the **taking** of marine mammals unless exempted or authorized.
  
- **Take** is defined as "to harass, hunt, capture, or kill, or attempt to harass, hunt, capture or kill any marine mammal."



# Definition of Harassment

## Harassment

Harassment means any act of pursuit, torment, or annoyance which

- has the potential to **injure** a marine mammal or marine mammal stock in the wild (Level A Harassment); or
- has the potential to **disturb** a marine mammal or marine mammal stock in the wild by causing disruption or behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering (Level B Harassment).



# Other MMPA Terminology Relevant to the Small Take Program

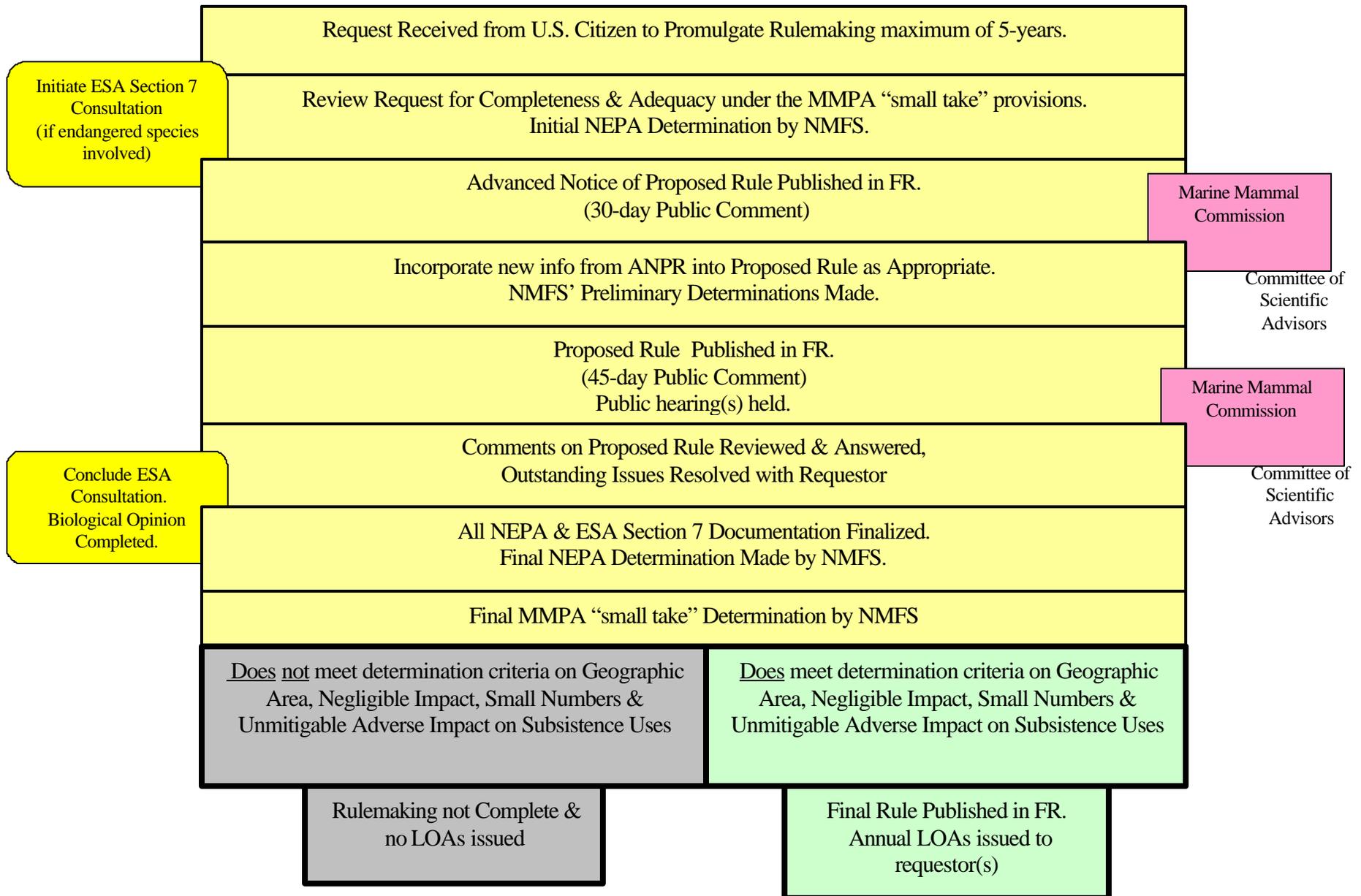
## Negligible Impact

An activity has a “negligible impact” on a species or stock when it is determined that total taking is not likely to reduce annual rates of adult survival or annual recruitment (i.e. offspring survival, birth rates).

## Small Numbers

An activity affects “small numbers” of a species or stock when it is determined that total taking will be small relative to the estimated population size and relevant to the behavioral, physiological, and life history characteristics of the species.

# LOA Rulemaking Process: MMPA Section 101(a)(5)(A)





# Navy Request for MMPA Small Take Authorization

**Harassment**, injury or mortality may be authorized through the Small Take Authorization Program if certain findings are made.

The total taking will:

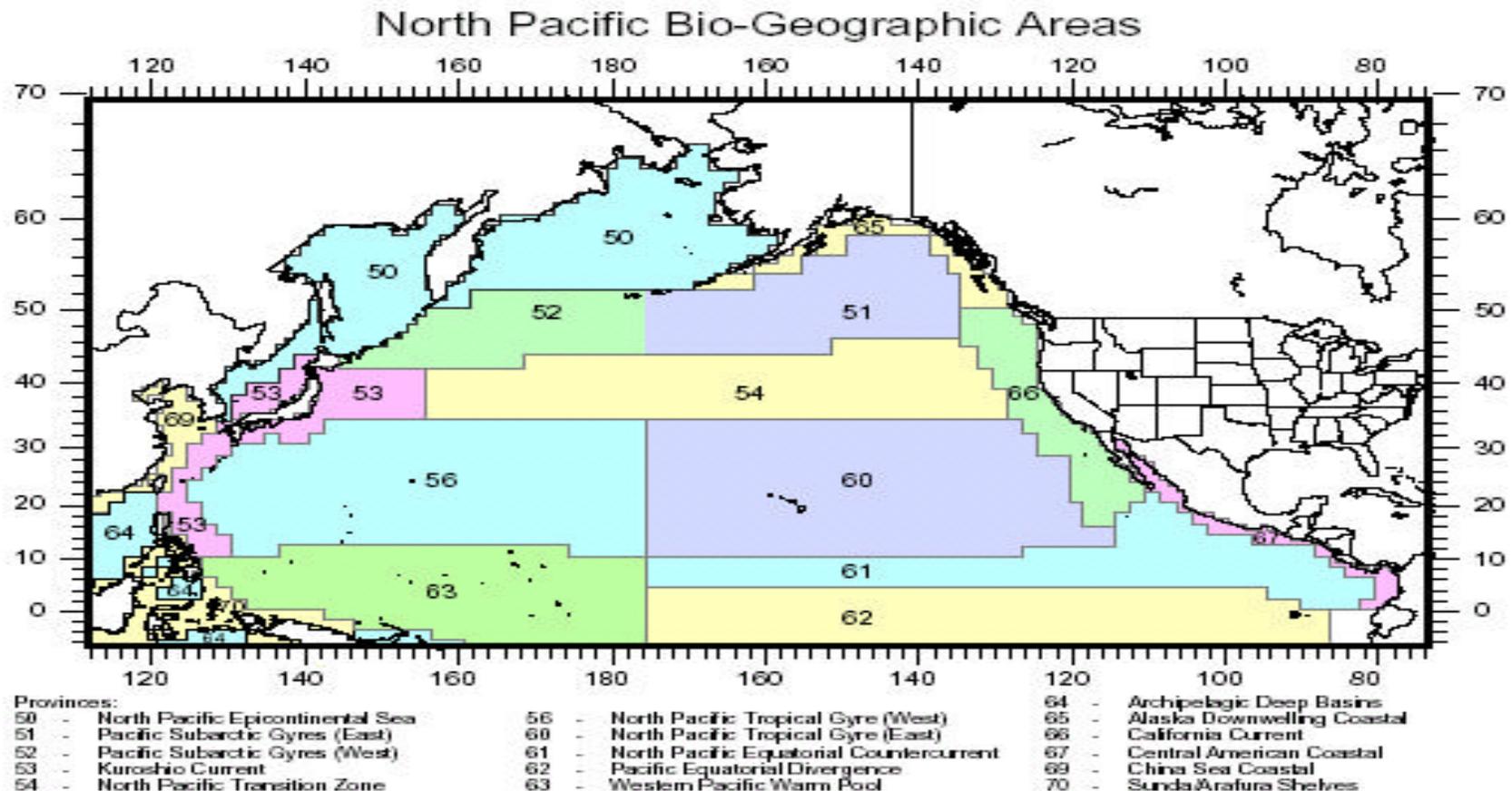
- 1) Occur in a specified geographical area
- 2) Have a negligible impact on the species or stock
- 3) Be small in number
- 4) Not have an adverse impact on Arctic subsistence users

For injury and mortality takes, 5-year regulations with 1-year authorizations (i.e. Letters of Authorization) are required.



# MMPA Small Take Authorization Determinations:

1) Will incidental takings occur in a specified  
geographical area?  
Yes





# MMMPA Small Take Authorization

## Determinations:

2) Will incidental takings have a negligible impact on the population or stock?

Yes

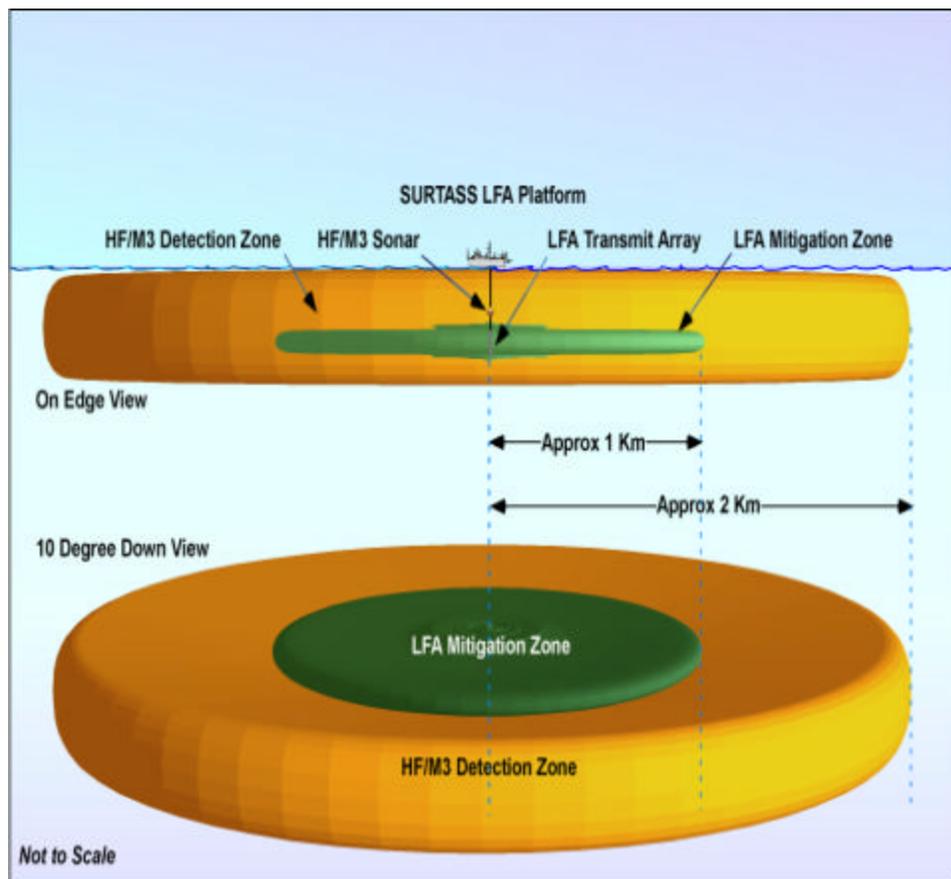
- Findings of SRP on marine mammals and LF sounds indicate no significant change in biologically important behavior will occur up to and below 155 dB
- Only 2 SURTASS LFA sonar systems will be operating at any time over the next 5 years
- LFA sonar will operate at relatively low duty cycle, for short mission periods, and only in offshore environs
- Duration of exposure to individual or aggregations of marine mammals will be limited when LFA sound source is moving through water
- Implement various mitigation measures, including:



2) Will incidental takings have a negligible impact on the population or stock? Yes

## Mitigation Measures

### Safety Zones

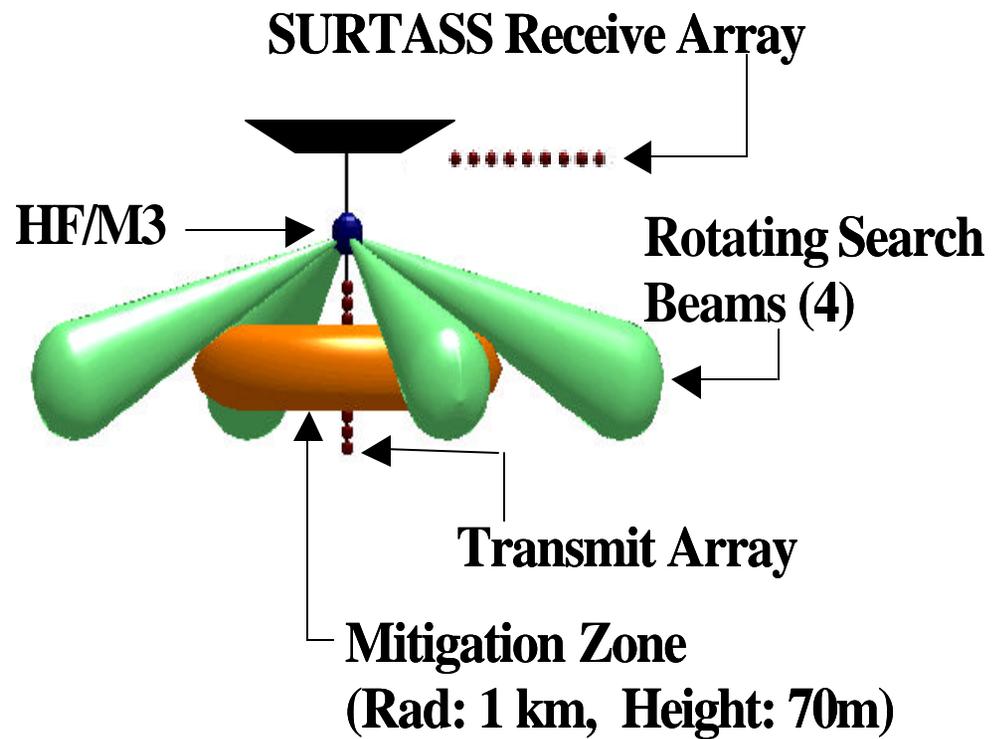


### Methods of Detection

- **Visual Monitoring**
  - Daytime observations from the SURTASS LFA sonar vessel
- **Passive Acoustic Monitoring**
  - Passive (low frequency) SURTASS array to listen for sounds generated by marine mammals
- **High Frequency Marine Mammal Mitigation Sonar (HF/M3)**
  - Targets LFA mitigation zone at or above 180 dB
  - Over 95% effective for each sweep



# HF/M3 System Design

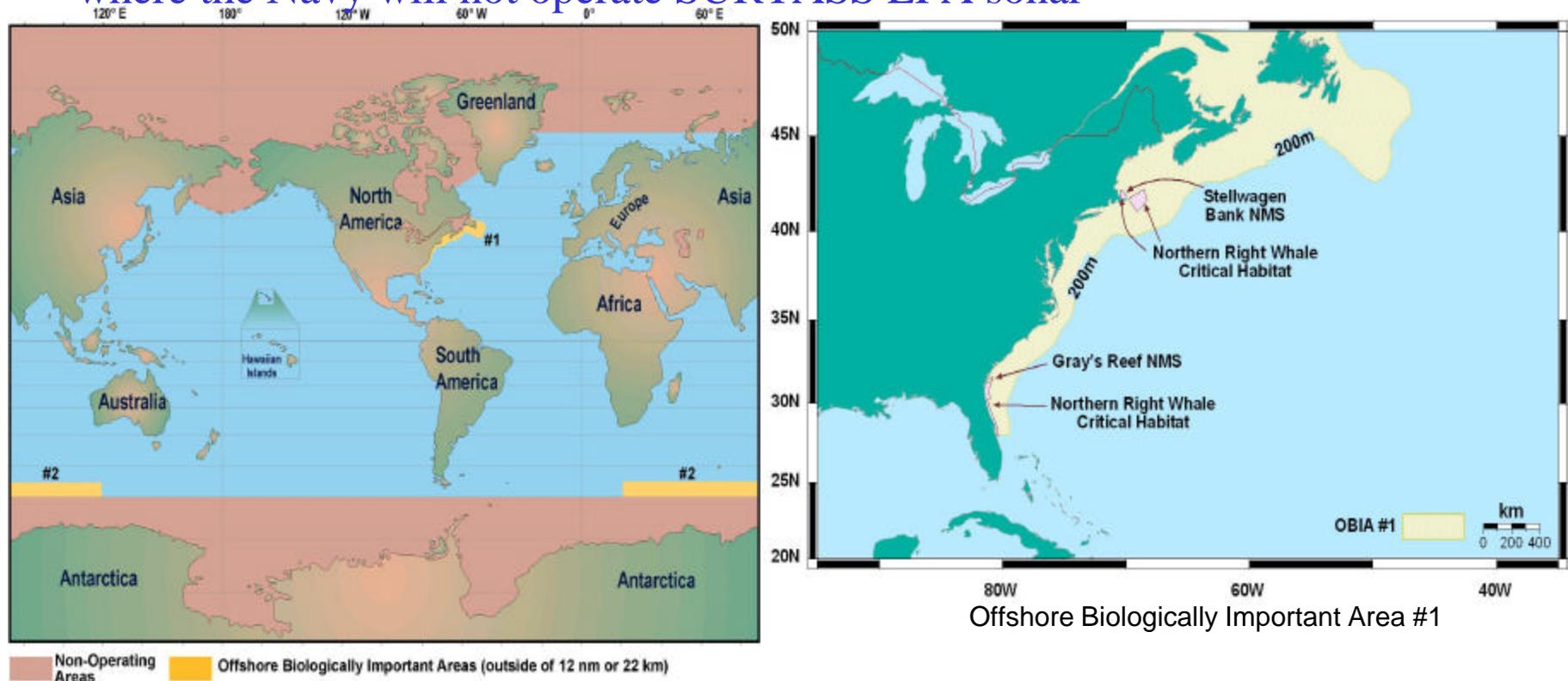




2) Will incidental takings have a negligible impact on the population or stock? Yes

## Mitigation Measures

- Implement a system of Offshore Biologically Important Areas (yellow areas) where the Navy will not operate SURTASS LFA sonar



- Prohibit the operation of SURTASS LFA within 12 nmi of any coast or island



# **MMPA Small Take Authorization Determinations:**

**3) Will incidental takings be small in number?**

**Yes**

To further ensure that the takings will be small and negligible, NOAA Fisheries will:

- Encourage the Navy to plan missions where and when the smallest number of marine mammals would be taken
- Reject annual authorizations for areas and seasons that would have the potential for increased levels of harassment



# MMPA Small Take Authorization

## Determinations:

4) Will incidental takings have an adverse impact on subsistence users in the Arctic?

No

- SURTASS LFA sonar will not operate in Arctic waters (pink areas) thus subsistence hunting in the Bering, Chukchi, or Beaufort Seas will not be impacted





# Research & Monitoring Requirements

- Systematically observe LFA sonar training exercises for injured or disabled marine animals
- Compare the forms of mitigation (visual, passive acoustic, HF/M3)
- Measure behavioral reactions of whales to sound levels that were not tested during the research phase, specifically between 155 dB and 180 dB
- Measure responses of sperm and beaked whales to LFA sonar signals
- Delineate habitat preferences of beaked whales and plan future LFA training exercises to avoid such areas
- Use passive acoustic monitoring (using bottom-mounted hydrophones) to detect possible silencing of calls of large whales before, during and after LFA training exercises
- Continue research with mitigation sonar (HF/M3)
- Initiate long-term, cumulative effects monitoring on one stock of marine mammals expected to be regularly exposed to LFA. Focus on demographic changes and trends in vocalizations of the selected stock



## ESA Section 7 Consultation

- NOAA Fisheries analyzed the effects of the operation of SURTASS LFA sonar system and the issuance of a MMPA small take authorization for this activity (Navy initiated consultation on October 4, 1999)
- The Biological Opinion concludes that these proposed activities are not likely to jeopardize the continued existence of threatened or endangered species under NOAA Fisheries jurisdiction, or destroy or adversely modify critical habitat that has been designated for those species.



# The MMPA, ESA & SURTASS LFA Operations Summary and Conclusions

NOAA Fisheries has determined that the incidental taking of marine mammals from SURTASS LFA sonar operations would:

- be limited to small numbers of marine mammals
- have no more than a negligible impact on the affected marine mammal stocks or habitats
- not have an unmitigable adverse impact on Arctic subsistence uses of marine mammals
- not likely jeopardize the continued existence of species listed as threatened or endangered, or destroy or adversely modify critical habitat designated for such species

These conclusions are supported by:

- findings of the SRP that no significant change in biologically important behavior will occur below 155 dB
- geographic operation restrictions,
- mitigation measures to minimize injury to any marine mammals,
- monitoring and supplemental research program-ONR funding (\$7M in FY02) & LFA sonar program funding (\$1 million annually)